

[54] **KEYBOARD SWITCH ASSEMBLY WITH IMPROVED HERMETICALLY SEALED DIAPHRAGM CONTACT STRUCTURE**

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[58] Field of Search ..... **200/159 R, 159 B, 200/166 BH, 167 R, 168 G, 5 R, 5 A, 16 A**

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[57] **ABSTRACT**

A contact key for use in a keyboard arrangement is disclosed wherein one contact extends through a circuit board and a second contact comprises a curved plate or dome spring is positioned on one side of the circuit board and is depressable so that the center thereof can come in contact with the first contact to complete a circuit. In one form of the invention the first contact comprises a rivet while in another form it comprises a plated-through hole to the back of the circuit board. The second contact can include a dimple at the center thereof which comes in contact with the first contact when the plate is depressed. A plurality of these first contact members are placed in a circuit board and the second contacts can be supported by a conductive support, such as a shim or plated support having apertures corresponding to the position of the first contacts. If the contact support is in the form of the shim, it can comprise a plurality of sections interconnected by frangible tabs which are broken during assembly to separate the sections, the tabs being bent through holes in the circuit board and crimped against the back side to hold the shim in place and to provide connections for the respective sections to appropriate circuitry. In an embodiment having a plated contact support, the support can be provided with one or more raised bosses to support the contact plate above the first contact.

**11 Claims, 10 Drawing Figures**

